



## **E. coli**

### **What is E. coli?**

- E. coli, short for Escherichia coli, is a bacteria that lives in the intestines of warm-blooded animals.
- People can be exposed to E. coli several different ways, including undercooked meat that has been contaminated in the slaughtering process, unprocessed dairy products, unwashed vegetables, contaminated water, and poor personal hygiene.

### **How does water become contaminated with E. coli?**

- **Combined sewer overflows** – More than 100 Indiana communities have wastewater systems that transport sewage and storm water through the same pipes. When it rains, those systems can become overburdened and release excess storm water and untreated sewage into nearby waterways. That raw sewage contains *E. coli* bacteria.
- **Septic systems** – When septic systems fall into disrepair or are full, the sewage can leak into nearby waterways. Because of this, the absorption field, which is the area the discharge is dispersed into the ground, should be located away from waterways and wells.
- **Straight pipes** – Some individual homes or subdivisions have pipes that flow directly from septic tanks to a river or lake. This household waste is untreated when it enters the waterway. This illegal practice should be corrected and is punishable by fines if allowed to continue.
- **Wildlife** – Ducks, geese, deer, raccoons and other fauna that tend to live on or near water can contaminate rivers and lakes with *E. coli*.
- **Urban and agricultural run-off** – Farm animals and pets have the potential to generate large amounts of manure. This manure, if handled or stored improperly, can end up in waterways. *E. coli* numbers in streams and lakes rise during high flows as the result of heavy rains.

### **Is E. coli dangerous?**

- There are several different types of *E. coli* bacteria, most of which are not harmful.
- There are only a few strains of *E. coli* that are highly toxic, one of which is *E. coli* 0157, the type commonly associated with food poisoning.
- When a significant amount of *E. coli* bacteria is ingested, it often causes severe diarrhea and abdominal cramps.
- In people with compromised immune systems, children under the age of 5 and the elderly, the *E. coli* bacteria can cause serious long-term health effects, including death.

### **What can I do to protect myself?**

- Consumers can prevent *E. coli* infection by thoroughly cooking ground beef, washing vegetables before consumption, avoiding unpasteurized milk, and washing hands carefully.

### **What is IDEM doing to protect Hoosiers?**

- The agency tests *E. coli* levels throughout the state to gauge the bacteria's level in rivers, lakes and streams.
- The agency uses this information to develop pollution reduction plans that address *E. coli* that originates from non-point sources, such as parking lots, riverbanks and fertilized fields.
- IDEM requires drinking and wastewater systems to conduct regular water tests.

### **Where can I get more information?**

- For additional information, contact the Indiana Department of Environmental Management, Office of Water Quality, Assessment Branch, at (317) 308-3137.
- Or visit IDEM's Web site at <http://www.IN.gov/idem/water/topics>.